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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

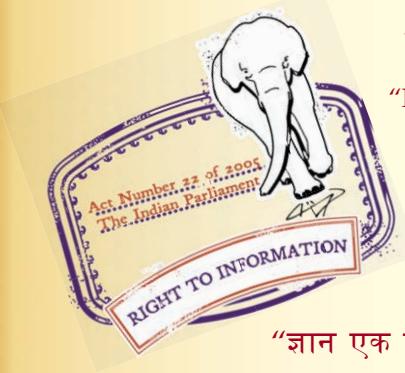
“Step Out From the Old to the New”

IS 12480 (1988) : Spiral Tapered Screw Extractors [PGD 5 :
Assembly Hand Tools]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



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Indian Standard

SPECIFICATION FOR SPIRAL TAPERED SCREW EXTRACTORS

- Scope** — Covers the dimensions and other requirements for spiral tapered screw extractors.
- Dimensions** — Shall be as given in Table 1.
- Material** — Shall be made from suitable steels meeting the requirements laid down in 4.

Suitable Example:

Steel designation 70C6, 75C6 or 80C6 conforming to IS : 1570 (Part 2)-1979 'Schedules for wrought steels: Part 2 Carbon steels (unalloyed steels) (*first revision*)' or high speed steel designation XT87W6Mo5Cr4V2 or XT72W18 Cr4V1 conforming to IS : 7291-1981 'Specification for high speed tool steels (*first revision*)'.

- The spiral tapered portion of the extractor may be made of high speed steel specified in 3 and the same may be butt welded with the shank made of suitable carbon steels.

4. Hardness

On taper portion : 500 - 600 HV
On shank : 320 - 450 HV

- Designation** — Screw extractor shall be designated by its number and the number of this standard.

Example:

Screw extractor number 6 (used for extraction of screws and studs of sizes over M20 to M25) shall be designated as:

Screw Extractor 6 IS : 12480

6. Protective Coating and Packing

- Each screw extractor shall be covered with rust proofing material.

- Each screw extractor or a set of screw extractors shall be wrapped in non-absorbent paper and packed in a carton. The carton shall bear the following informations:

- Designation;
- Material; and
- Manufacturer's name, initials or trade-mark.

- Marking** — Each screw extractor shall be stamped with the designating number, and manufacturer's name, initials or trade-mark.

- Standard Marking** — Details available with the Bureau of Indian Standards.

8. Sampling

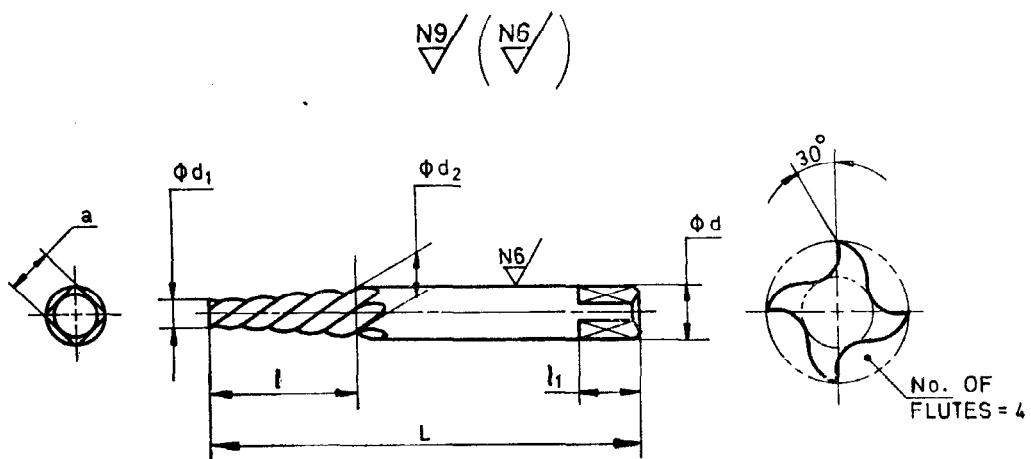
- Lot** — All the screw extractors of same size and manufactured from same material under similar conditions of production shall be grouped together to constitute a lot.

- In order to ascertain the conformity of the lot, the procedure for sampling inspection as given in IS : 2500 (Part 1)-1973 'Sampling inspection tables: Part 1 Inspection by attributes and by count of defects (*first revision*)' shall be followed. For various characteristics, the sampling procedure as given in 8.2.1 and 8.2.2 shall be followed.

8.2.1 For dimensions, the single sampling plan with Inspection Level IV and Acceptable Quality Limit (AQL) 2.5 percent as given in Tables 1 and 2 of IS : 2500 (Part 1)-1973 shall be followed.

8.2.2 For hardness, the single sampling plan with Inspection Level II and Acceptable Quality Limit (AQL) 2.5 percent as given in Tables 1 and 2 of IS : 2500 (Part 1)-1973 shall be followed.

TABLE 1 DIMENSIONS FOR SCREW EXTRACTORS
(Clause 2)



All dimensions in millimetres.

Designating No.	Size of Screw or Stud to be Extracted		Small End Diameter d_1		Large End Diameter d_2		Taper Length l	Overall Length L Nom	Shank Dia d	Square		Recommended Drill Size to be Used Prior to Extraction
	From	Up to and Including	Min	Max	Min	Max				a	l_1	
			h12									
1	M5	M6	1.4	1.8	3.7	4.3	18	51	4	3.15	6	2.0
2	M6	M8	2.0	2.4	4.4	5.2	22	60	5	4.00	7	2.8
3	M8	M11	2.8	3.2	6.4	6.7	25	70	6	4.50	7	4.0
4	M11	M14	4.4	4.8	7.9	8.7	29	76	8	6.30	9	5.5
5	M14	M20	6.0	6.4	11.1	11.9	39	86	11	9.00	12	7.0
6	M20	M25	8.7	9.5	15.1	15.9	43	95	15	11.20	14	10.0
7	M25	M35	11.9	12.7	19.1	19.8	54	105	19	14.00	18	13.5
8	M35	M45	18.3	19.1	25.4	26.2	54	114	25	20.00	24	20.0
9	M45	M54	24.6	25.4	31.8	33.3	58	118	32	25.00	28	26.5
10	M54	M64	31.0	31.8	38.1	39.7	64	127	38	31.50	34	32.5
11	M64	M76	37.3	38.1	46.0	47.6	76	143	46	35.50	38	39.5
12	M76	M90	46.8	47.6	57.2	58.7	89	159	58	45.00	46	49.0

EXPLANATORY NOTE

Screw extractors are used for quick removal of broken screws or studs without damaging the threads of the main component. In case of broken screws or studs which are stuck up in the component/part, drill a hole of suitable size in the broken end, insert the extractor and turn to the left with the use of a tap wrench, thus extracting the screw on its own thread.

While formulating this specification, assistance has been derived from the details received from leading manufacturers of this product.